1. A method for producing an oxide ceramic shaped part, comprising:

pressing a selected one of a powder provided with a binding material and a powder mixture of an oxide ceramic into a shaped part;

following the pressing of the selected one of the powder and the powder mixture into the shaped part, pre-sintering the shaped part at substantially atmospheric pressure and a temperature of 600 to 1,300 °C;

following the pre-sintering of the shaped part, evacuating a container and, in particular, a closed container, in which the pre-sintered shaped part is disposed with the shaped part having a maximum density of 10 to 90 %, and the container being at an absolute pressure of less than 40 mbar and, in particular, at between 10 to 30 mbar; and

following the evacuation of the container, applying an infiltration material onto the shaped part via infiltration, the infiltration material operating to seal off the shaped part relative to the surrounding atmosphere and the length of time of the infiltration being, preferably, 1 to 10 minutes.

2. A method according to claim 1, wherein the organic binding material is an ethylene wax, a polyvinyl resin, a polyvinyl pyrrolidone, a polyvinyl acetate, a polyvinyl butyral and/or cellulose.

3. A method according to claim 1, wherein the further material is formed from a precursor of a non-metallic, inorganic phase or an amorphous glass phase and a solvent, or a connection with a hydrolyzable element of a metal, or an alcoholate of a metal chosen from the group Al, Ti, Zr, and Si, or a precursor of a silicate glass, especially a hydrolyzable silane.

4. A method according to claim 1, wherein, after the infiltration, a further shaping of the shaped part is effected via a material reduction working and/or etching.

5. A method according to claim 1, wherein, after the infiltration, the shaped part is finish sintered to a theoretical density of 99.5 % at a temperature from 1,300 to 1,550 °C.

6. A method according to claim 1, and further comprising, after a selected one of the infiltration and a finish sintering of the shaped part under environmental pressure, shaping the exterior of the shaped part via at least one of a material reduction working and etching.

7. A method according to claim 1, wherein the outer surface of the shaped part is at least sectionally coated with at least one coating of a mixture material that, in particular, is effected after the application of a further thermal treatment.

8. A method according to claim 1, wherein an adhesive is applied at least partially onto the outer surface of the shaped part and a further material is secured to the part.

9. A method according to claim 1, and further comprising, following the partial sintering of the part, shaping the shaped part via a material reduction working with an excess of 10 to 50 % and, preferably, with an excess of 15 to 30 %.

10. An oxide ceramic part, comprising a core or a region of a crystalline oxide ceramic phase and a coating at least partially enclosing the core or a region thereof, which is formed from the crystalline oxide ceramic phase and a non-metallic, inorganic phase (infiltration phase) following the crystalline oxide ceramic phase.

11. A shaped part according to claim 10, wherein the crystalline oxide ceramic phase is formed substantially of oxides or oxide mixtures of the elements zirconium, aluminum, or titanium, in particular, from a zirconium oxide mixture ceramic of zirconium oxide and mixtures of metal oxides, the metal oxides of oxides of the

Groups III a, III b, and IV b of the periodic table of elements, in particular, from oxides of the metals Hf, Y, Al, Ce, Sc, Er, and/or Ti.

12. A shaped part according to claim 10, wherein the crystalline oxide ceramic phase is substantially formed of an in particular doped zirconium oxide ceramic of zirconium oxide with an additive of yttrium oxide, preferably in the range of 0.1 to 10 mole %.

13. A shaped part according to claim 10, wherein the crystalline oxide ceramic phase is substantially formed of zirconium oxide ceramic with

an additive of yttrium oxide, in the range of 2 to 4 mole %, and, in particular, in the range of 2 to 10 mole % and/or

an additive of cerium oxide, preferably in the range of 2.5 to 15 mole % and/or

an additive of erbium oxide, preferably in the range of 2.5 to 5 mole % and/or

an additive of scandium oxide, preferably in the range of 2.5 to 5 mole % and/or

an additive of titanium dioxide, preferably in the range of 0.1 to 15 mole %.

14. A shaped part according to claim 10, wherein the crystalline oxide ceramic phase is substantially comprised of an aluminum oxide mix ceramic formed of aluminum oxide and a mixture of metal oxide and/or predominately zirconium oxide.

15. A shaped part according to claim 10, wherein a core or a region of a crystalline oxide ceramic phase with a theoretical density >99.5 % and a biaxial strength of not less than 800 MPa and a fracture strength of more than 6.5 MPa $m^{1/2}$ is effected.

16. A shaped part according to claim 10, wherein at least a portion of the core is covered by a coating of an amorphous silicate phase SiO_2, a crystalline silicate phase, or a non-metallic, inorganic phase, whereby the crystalline silicate phase is comprised

of SiO_2 and other metal oxides, especially oxides of the metals of the Groups Ia, Ib, IIa, IIb, IIIa, IIIb, IVa, IVb, and in particular oxides of Al and Ce.

17. A shaped part according to claim 10, wherein the coating which at least partially encloses the core is a crystalline phase and, especially, is micro crystalline ZrO_2.

18. A shaped part according to claim 10, wherein the thickness of the coating that at least partially encloses the core is, at a maximum, 90 % of the thickness of the finish sintered part, especially 2 to 30 % of such thickness.

19. A shaped part according to claim 10, wherein the coating is at least partially comprised of the crystalline oxide ceramic phase and that, especially, the chemical resistance of this coating to acid is substantially less than that of the crystalline oxide ceramic phase in the core.

20. A shaped part according to claim 10, wherein the infiltration phase coating comprises a greater translucence than the core or the region comprised of the crystalline oxide ceramic phase.

21. A shaped part according to claim 10, wherein the finish sintered part, in the region of its outer surface, comprises a retentive design formed after an etching step in the region of the coating that covers the core, whereby the etching depth is, in particular, at a maximum equal to the thickness of the coating covering the core.

22. A shaped part according to claim 10, wherein the shaped part is configured as a selected one of a dental root post in the form of a bracket or abutment, a dental implant, a three section bridge, a multi-section bridge, a frame for a bridge, an alluvial material shaped part, a crown, a partial crown, a partial component of an inlay, a

partial component of an onlay, a cap, a reduced crown,a synthetic joint, an orthopedic implant, and a shaped part of an orthopedic implant.

23. A shaped part according to claim 10, wherein the shaped part comprises an at least single coated coating formed of a mixture material.